Montana Fish, Wildlife & Parks

2165 Highway 2 East - Havre, Montana 59501 - (406)265-6177 - Fax (406)265-6123

April 27, 1999

To:

Kim & Cindy Kafka, HC Box 302, Havre, MT 59501
Environmental Quality Council, Capital Building, Helena, MT 59620
Dept. Of Environmental Quality, Directors Office, P.O. Box 200901, Helena, MT 59620
MT Historical Society, P.O. Box 201202, Helena, MT 59620
MT Wildlife Federation, P.O. Box 1175, Helena, MT 59624
Luella Schultz, Department of Livestock, P.O. Box 202001, Helena, MT 59620-
MT. Dept. Fish, Wildlife & Parks, P.O. Box 200701, Helena, MT 59620
Directors Office
Wildlife Division
Karen Zackheim
Regional Supervisors
MT State Library, P.O. Box 201800, Helena, MT 59620
Jim Jensen, MT Environmental Info. Center, P.O. Box 1184, Helena, MT 59624
Janet Ellis, MT Audubon Council, P.O. Box 595, Helena, MT 59624
George Ochenski, Government Affairs and Consulting, P.O. Box 689 Helena, 59624
Kacy Kellog, DNRC, P.O. Box 1828, Havre, MT 59501
Hill County Library, 402 3 ST., Havre, MT 59501
Hill County Commissioners, 315 4th ST., Havre, MT 59501
Darlyne Dasher, H. C. 65 Box 25, Fort Peck MT 59501
Representative Ray Peck, 729 4th Ave., Havre, MT 59501
Representative Toni Hagener, 612 17th ST., Havre, MT 59501
Senator Jon Tester, RR1 Box 709, Big Sandy, MT 59520

Ladies and Gentlemen:

The enclosed Final Environmental Assessment (EA) has been prepared for the Kafka/ Diamond K Elk Enterprises Ranch 2 in Hill County and is submitted for your consideration. The final (EA) closes May 4, 1999. If your have questions, feel free to contact me at (406) 265-6177. All comments may be sent to the address above.

Thank you for your interest.

Sincerely,

Shane Reno

Shane Reno, Game Warden

DIAMOND K ELK ENTERPRISES 2 GAME FARM APPLICATION
FINAL ENVIRONMENTAL ASSESSMENT

MONTANA ENVIRONMENTAL POLICY ACT (MEPA) PROCESS

Montana Fish, Wildlife & Parks (FWP) is required to perform an environmental analysis in accordance with MEPA for "each proposal for projects, programs, legislation, and other major actions of state government significantly affecting the quality of the human environment" [Administrative Rules of Montana (ARM) 12.2.430]. FWP prepares environmental assessments (EA) to determine whether a project would have a significant effect on the environment. If FWP determines that a project will have a significant impact that cannot be mitigated to a minor impact, the agency will prepare a more detailed environmental impact statement (EIS) before making a decision. If the agency determines that a proposed project will not have a significant impact, or that the impact can be mitigated to minor or none, the agency may make its licensing decision based upon the results of the EA and criteria established under Montana game farm statute Montana Code Annotated (MCA) Title 87, Chapter 4, Part 4.

Mitigation measures may be considered in FWP's analysis as a means to reduce impact(s) of a game farm to a level below significance. FWP may also recommend mitigation measures to reduce impacts that are considered minor.

FWP prepared a Draft EA for the proposed Diamond K Elk Enterprises 2 Game Farm which identified no significant impacts from the Proposed Action that could not be mitigated. The Draft EA was released for public review and comment April 5, 1999. Public comments were accepted through April 26, 1999. The Draft EA and this Final EA are hereby approved as the Final EA. This Final EA for the proposed development of the Diamond K Elk Enterprises 2 Game Farm contains a summary of the Proposed Action, the affected environment, and potential consequences of the Proposed Action, all of which are described in additional detail in the Draft EA, which is adopted in this Final EA. This document also describes mitigation measures, summarizes public comments, and provides the conclusion of the EA. The preferred alternative is the Proposed Action with two required stipulations, and several recommended mitigation measures.

PROPOSED GAME FARM APPLICATION

FWP received an application on December 8, 1998 from Kim and Cindy Kafka to construct the Diamond K Elk Enterprises Ranch 2 Game Farm at a site approximately 6 miles southwest of Havre, Hill County, Montana. The Proposed Action would place up to 400 adult elk, 10 pronghorn antelope, 10 mule deer, 10 white-tailed deer, 10 bighorn sheep, and 10 mountain goats within the 869-acre enclosure. The primary purpose of the proposed game farm is to breed these species within six different pastures contained within the game farm. Animals of each species would be present on a year-long basis. Occasional fee shooting of game farm animals by the public is also proposed.

The site adjoins the Big Sandy Creek valley and consists of approximately 717 acres of cropland, 143 acres of rangeland, and three farm ponds (9 acres). The game farm would be developed as Phases 1, 2, and 3 consisting of approximately 148, 232, and 489 acres, respectively. The Kafka's residence is located adjacent to the proposed Phase 1 pasture. Cattle would be stocked on pastures at the game farm from late fall through early spring, but would be kept separated from the game farm animals.

The Diamond K Elk Enterprises Ranch 2 Game Farm would be a separate operation from two game farms owned by the applicants and one additional game farm they have proposed. The existing game farms comprise a 40-acre elk game farm adjoining the proposed Phase 1 pasture (FWP Game Farm License No. 622) and a 1,145-acre elk shooting preserve located 6 miles to the east (Diamond K Ranch Game Farm). The additional proposed game farm consists of a 65-acre elk pasture (Big Sandy Elk Game Farm) located immediately northeast of the proposed Phase 3 pasture.

The purpose of the game farm is to provide breeding stock, meat, antlers, and occasional fee shooting. The applicants would sell and dispose of game farm animals in accordance with Montana game farm and disease control requirements stipulated in Montana statute and administrative rules. Fence construction would be in accordance with requirements of FWP under ARM 12.6.1531. Fencing would consist of 8-foot high, 6-inch mesh game fence supported by wood or steel posts set at least 3 feet into the ground and not more than 24 feet apart. Corner and end posts would be braced. Eleven proposed exterior gates would be equipped with one latching and at least one locking device each. Quarantine and handling facilities would be provided in accordance with Department of Livestock (DoL) requirements.

ALTERNATIVES

One alternative (No Action Alternative) is evaluated in this EA. Under the No Action Alternative, FWP would not issue a license for the Diamond K Elk Enterprises 2 Game Farm as proposed. Therefore, no game farm animals would be placed on the proposed game farm area. Implementation of the No Action Alternative would not preclude other activities allowed under local, state and federal laws to take place at the game farm site.

AFFECTED ENVIRONMENT

The proposed Diamond K Elk Enterprises Ranch 2 Game Farm would be located on 869 acres of primarily dry cropland and prairie rangeland in an area known as the Tiger Ridge Gas Field. The site is situated on a bench to the east of Big Sandy Creek at an elevation of about 2,600 feet. Topography of the site is generally level to gently sloping. The property is currently used to pasture livestock and farm small grains. Three gas wells are also located within the proposed enclosure. These gas wells are plumbed directly into a pipeline collection system, and consist of a well head covered with a small wooden shed. The gas wells are maintained about once per month by the gas production company.

Geology of the area is mainly Quaternary-age glacial ground moraines overlying the sandstone, siltstone, and shale of the Cretaceous-age Judith River Formation. The glacial deposits are light-gray clay-rich to sandy or pebbly till containing scattered erratic boulders. Soils on the site are mainly loam to clay loam in texture with a neutral to strongly alkaline reaction. Clay content generally ranges from 10 to 45 percent. Soils are deep (greater than 60 inches thick), well-drained, and have slow permeability. Erosion potential is moderate to high by water and erodible to slightly erodible by wind.

The site drains to Big Sandy Creek through one main gully and several smaller gullies which incise the east slope of the valley. The main gully drains the Phase 1 and 2 pastures and then cuts northward to the immediate east of the Phase 3 pasture. The majority of the Phase 3 pasture drains northeast to the main gully, while the remainder drains northwest through the smaller gullies leading directly to the creek. Runoff from the site would most likely occur during late winter and spring snowmelt or major precipitation events.

An earthen dam within the Phase 1 enclosure blocks the main gully and produces the largest (approximately 7 acres) of three farm ponds at the site. This pond is used by waterfowl and is bordered by vegetation typical of wetlands. The Proposed Action would fence the pond out of the surrounding pastures to allow the potential to control access to the pond by game farm animals and cattle.

The other two farm ponds are less than 1 acre in size. One is an excavated impoundment in the northeast enclosure of the Phase 1 pasture and the other is located behind a small earthen dam on a minor drainage located on the east side of the Phase 3 pasture. Water for the elk would be obtained from the farm ponds and/or water tanks filled with water from Big Sandy Creek under the applicants surface water right. Six water wells are located on neighboring properties within 1 mile of the site, including one well which adjoins the northeast corner of the Phase 1 pasture. The adjoining well is 135 feet deep with a static water level at 67 feet below grade.

The proposed game farm is comprised of 717 acres of cropland (83%), 143 acres of rangeland (16%), and 9 acres of farm ponds and associated wetlands (1%). Current use of this site is to grow small grain crops and to pasture cattle following the harvest of the crops. Native vegetation remains only in uncultivated areas along the edges of the agricultural fields. Wetlands surround the farm pond that impounds surface water runoff in the main gully that crosses the game farm. Native vegetation has been eliminated from the cropland area.

Forage production in the tame pasture rangeland site is estimated at 1,500 pounds per acre and forage production in the cultivated field when used for oat/pea hay averages about 3,000 pounds per acre. Forage production in the wetland areas would be variable depending upon precipitation and runoff. Average productivity might be around 2,000 pounds per acre. Total forage production at the proposed game farm site is estimated at 1,308,000 pounds. Should the cultivated area be planted to perennial introduced vegetation, productivity in the cropland area would likely decline to approximately 1,500 pounds per acre. There are no federally-listed threatened or endangered plant species expected to occur within the proposed game farm site. The proposed game farm site does contain suitable habitat for noxious weeds such as spotted knapweed, leafy spurge, Canada thistle and mullein, but these species were not evident during the site inspection.

The proposed game farm site represents low density mule deer, white-tailed deer, and pronghorn antelope habitat. These species use the game farm area on an occasional basis. About once a year, a wild elk or moose is reported to travel along Big Sandy Creek. There are no known migration corridors or critical winter range for any big game species in this area. This area is also used by sharp-tailed grouse, gray partridge, and pheasants. These birds primarily winter in shelter belts near the Kafka ranch headquarters and disperse from this area during early spring. In addition, a small impoundment near the proposed game farm site is used by large numbers of ducks, geese and swans during migratory periods. Some Canada geese and mallards nest in the vicinity of the farm pond during spring. This area could potentially be used by migratory bald eagles, and peregrine falcons (federally-listed bird species), but there are no known resident threatened or endangered wildlife species.

The proposed game farm is predominantly surrounded by sparsely populated private rangeland and cropland. Seven neighboring residences have been identified within 1 mile of the site. The southwest corner of the Phase 2 pasture adjoins a section state land. Additional state land about 1 mile east of the Phase 1 pasture is Fort Assinniboine, currently used as an agricultural experiment station. One-eighth section of U.S. Bureau of Land Management land is located 0.5-mile southwest of the Phase 3 pasture. Public and private lands in this area are commonly accessible to local hunters seeking pheasants, deer, antelope, and coyotes.

Seven cultural properties exist on or immediately adjacent to the proposed game farm. These cultural features include rock cairns, tipi rings, lithic scatters, firehearths or roasting pits, and/or historic homesteads or farms.

CONSEQUENCES OF THE PROPOSED ACTION

Impacts to Soil Resources and Vegetation

Impacts to soil and land resources as a result of the Proposed Action are expected to be slight, but include: susceptibility to water erosion of the various soil types; susceptibility of certain soils to wind erosion; and relatively high clay percentages resulting in slow permeability of the soils. The last concern can cause gumbo conditions when it rains, which can account for considerable soil erosion when roads and paths are used under these conditions. There would also be an impact associated with the effects of pasturing the elk on wet soils. This can result in excessive compaction and reduce overall soil productivity.

The Proposed Action would place up to 400 adult elk, 10 pronghorn antelope, 10 mule deer, 10 white-tailed deer, 10 bighorn sheep, and 10 mountain goats within the 869-acre enclosure on a year-long basis. The site would not supply all forage requirements of the game farm animals on an annual basis. In addition, forage productivity would likely decline under year-long continuous grazing and there would probably be unvegetated areas where the game farm animals concentrate. The proposed game farm stocking rate would average 2.2 acres per adult elk and 17.4 acres per adult animal of the other five species. Total overall stocking rate would average 1.9 acres per adult animal. Considerable supplemental feed would be required to sustain the game farm animals on a year-long basis.

An existing use of a portion of the proposed game farm site is to winter 400 to 450 adult female cattle. At the start of the wintering period, 300 to 350 calves are held here until their sale, and at the end of the wintering period, the adult cows calve on this site. This practice with cattle would be continued on this site once the game farm is fenced and licensed. Although the vegetation is dormant in the winter and the ground is generally frozen, the concentration of over 800 large ungulates into six game farm pastures totalling 869 acres would further impact the vegetation and soil. Under existing conditions, cattle are not present from spring through early fall, and the area is used to grow pasture, hay, and other agricultural crops during the growing season. Under dual use there would be no growing season rest for this area. Accumulation of manure and loss of vegetative cover could become a problem in some areas of the site.

There are no plans to alter the native vegetation remaining on the edges of the cropland or to replant the pasture currently supporting tame pasture grasses. However, the cropland would be seeded to alfalfa, crested wheatgrass and pubescent wheatgrass to establish a perennial vegetative cover. Areas where elk and other game farm animals are fed or handled may lose vegetative cover or fail to develop vegetative cover, but this would be restricted to a small portion of the game farm. The proposed average stocking level of 1.9 acres per game farm animal on a year-long basis is relatively high for a dryland range site such as this. The dual use of this site by 400 to 450 adult cattle during winter would further impact vegetation resources. This stocking level would exert a significant influence on both the tame pasture and native grassland sites. Highly palatable plants would likely decrease in abundance while unpalatable plants would increase.

Although noxious weeds were not apparent at this site, disturbed sites around feeding areas or handling facilities would provide an opportunity for weeds to become established. Weed seeds could potentially be imported into the area with feed for the elk and other game farm animals. The proposed stocking rate would also encourage the establishment of weeds.

Impacts to Water Resources

Increased runoff and erosion could occur in some areas of the game farm if the stocking rate exceeds the carrying capacity of the pasture and vegetative cover is diminished. If vegetative cover is reduced significantly, the game farm operation could meet the definition of an "animal feeding operation" (ARM 17.30.1304(3)). If water containment structures are needed on the project site to control runoff and do not have the capacity for the 25-year, 24-hour storm, a "concentrated animal feeding operations" (CAFO) permit must be obtained to permit the discharge. A CAFO permit could eventually be required for the Diamond K Enterprises Ranch 2 Game Farm operation if the proposed maximum stocking rate of 400 adult elk, 50 adult game farm animals of other species, and up to 400 to 450 adult cattle is realized and there is extensive loss of vegetative cover. Filling or dredging of any waters of the U.S. (e.g., culvert installation) may require a "404 Permit" from the U.S. Army Corps of Engineers (COE).

Domestic elk fecal matter and nutrient-enriched water may have a minor effect on the quality of groundwater and surface water in the vicinity of the site. Use of the 869-acre site to winter up to 400 to 450 cattle in combination with its use by up to 450 game farm animals could produce large quantities of excess nutrients and manure after several years of operation. Nutrient-laden runoff from the site could potentially enter Big Sandy Creek during periods of snowmelt or precipitation which produce flow out of the farm ponds and into the main gully draining the site. Effects of such a discharge from the site would be moderated by the high flow rates that would occur in Big Sandy Creek. The closest neighboring water supply well is in excess of 100 feet deep and is not likely to be affected by the game farm.

Impacts to Wildlife Resources

The proposed game farm site is not located within any critical big game winter range, nor is it located along a migration corridor. This specific site receives only occasional use by mule deer, white-tailed deer, and pronghorn antelope. The potential impacts on big game species would largely be limited to the few deer and antelope that reside in this general area. Fencing of 869 acres would be a minor impact because only a few wild deer and antelope live in the general area of the proposed game farm. This area has been extensively impacted by agriculture for most of this century, and availability of agricultural habitat is not a limiting factor for these deer and antelope. Wild elk can potentially pass through this area on occasion and could be attracted to the game farm especially during the rut. Bulls fighting through the fence and damaging the fence has been reported elsewhere.

The proposed game farm fence would be located primarily on level land and would cross slight slopes (less than 10 degrees) in only a few areas. There would only be minimal opportunity for wild ungulates to enter the game farm because of the excellent characteristic for fencing, and low density of wild deer, antelope and elk. Should deer or other wild ungulates enter the game farm, they would likely be destroyed rather than released back to the wild. These impacts may affect individuals but not populations. There is very little potential for large predators to pass through this area and be attracted to the animals in the enclosure.

Despite their low numbers, deer and pronghorn antelope do pass through this area and the fencing of 869 acres is expected to alter their daily or seasonal movement patterns. The effect of the fence as a passage barrier would be diminished somewhat because the game farm would be fenced as two separate units of 380 acres (Phase 1 & 2 pastures) and 489 acres (Phase 3 pasture). There would be a small opening between the northwest corner of the Phase 1 & 2 pasture and the southeast corner of the Phase 3 pasture. The Phase 1 & 2 pasture would be contiguous with the existing 40-acre game farm thereby forming a 420-acre enclosed area. In most cases, a deer or antelope attempting to travel through this area would need to walk 1.0 to 1.5 miles to reach the same location that could be obtained by walking 0.5 mile if the fence were not present. In addition, due to the configuration of the proposed game farm, there would be five sides with at least 1 mile of continuous fence runs, and there would be one side with a internal right angle 0.5 mile from the exterior corners. Added to this maze of fencing is a proposed 65-acre game farm located immediately northeast of the Phase 3 pasture, and the Kafka ranch headquarters at the northeastern corner of the Phase 1 pasture.

During snow free periods, distances required to circumnavigate (1.0 to 1.5 miles) the game farm are within the range of daily movement of deer and pronghorn. Topography is relatively level and wild ungulates would not be forced to travel through unfavorable habitat or terrain. However, during winter with periods of drifted snow, travel around the game farm fence might become more difficult and coyotes may be able to take advantage of the fence barrier to aid in capturing deer or antelope. The proposed game farm fence has the potential to influence individual wild big game animals, but would not effect overall populations of deer and antelope in this general area.

Risk/Health Hazards

An existing use of a portion of the proposed game farm site is to winter 400 to 450 adult female cattle. At the start of the wintering period, 300 to 350 calves are held here until their sale, and at the end of the wintering period, the adult cows calve on this site. Under the existing conditions, cattle are not present from spring through early fall, and the area is used to grow pasture, hay, and other agricultural crops during the growing season. This practice of wintering cattle would be continued on this site once the game farm is fenced and licensed. Under dual use, there would be no growing season rest for this area, and accumulation of manure and loss of vegetative cover could become a problem in some areas of the game farm. Diseases such as brucellosis are most easily transmitted during the calving period when afterbirth is present on the ground. However, it is assumed that cattle and game farm animals would be confined to separate pastures during periods of dual use which should minimize contact between the various species. In addition, the elk and cattle are assumed to be brucellosis and tuberculosis free. The accumulation of manure would result in conditions that promote the spread of parasites and diseases.

The risk of disease being passed from game farm elk to domestic livestock and wildlife can also be reduced if internal fence integrity is maintained and the mitigation measures described in this EA are followed. Potential for disease transmission to domestic livestock and wildlife from game farm animals is also mitigated through DoL disease testing requirements. All animals to be placed on this game farm are required to be tested for tuberculosis at the time of import, purchase and/or transportation to the game farm. A test for brucellosis is also required for all game farm animals that are sold or moved within the state, and is required for all game farm animals imported into Montana. Montana is presently a tuberculosis-free and brucellosis-free state (i.e., these diseases have not been diagnosed in domestic livestock).

Chronic wasting disease (CWD) also has been detected in game farm elk in three states and one Canadian province, but the mode of transmission is unknown and there is no test for this disease in living animals. CWD has been a known wildlife disease for 30 years in Colorado and Wyoming. There is no evidence of CWD transmission to domestic livestock or humans. Each game farm is required to have access to an isolation pen (quarantine facility) on the game farm or approved quarantine plan to isolate any animals that are imported or become ill. The state veterinarian can require additional testing and place herds under strict quarantine should problems arise. Implementation of best management practices for animal husbandry by the licensee are necessary to ensure the health status of the herd.

There is a potential for transmission of water-borne disease pathogens, if present, to be transported downstream from the game farm in Big Sandy Creek. However, this risk would be minor because of game farm animal disease testing requirements and because game farm runoff into Big Sandy Creek would occur only during late winter snowmelt or major precipitation events. In addition, water in Big Sandy Creek is not expected to be used for human consumption. While water provides a favorable environment for diseases such as brucellosis, the dilution factor associated with flowing surface water (i.e., Big Sandy Creek during major runoff events) makes it an unlikely means of transmission.

If tuberculosis or brucellosis were to be transmitted from domestic elk and to wild elk and deer, hunters field dressing wild elk or deer would be subject to some risk of infection. Veterinarians and meat cutters working with diseased game farm animals are at risk of becoming infected with brucellosis or tuberculosis. Routine brucellosis and tuberculosis testing requirements for game farm animals offer a measure of surveillance to minimize risk to human health.

Seven neighboring residences have been identified within 1 mile of the site. In addition, unimproved county roads are located on the southern and eastern boundaries of the Phase 3 pasture and on the northern, western, and southern boundaries of the Phase 1 & 2 pasture. These nearest residences and the county roads are within the average maximum ranges for high-powered big game rifles. The residence to the north of the proposed Phase 3 pasture is located in a low lying area and is at least partly shielded by topography. Other neighboring residences would be exposed to an errant bullet as would anyone traveling public right-of-ways bordering the game farm pastures.

Cumulative Effects

The Proposed Action could result in some potential cumulative impacts. There is an existing 40-game farm at the Kafka ranch headquarters adjacent to the Phase 1 & 2 pasture. There also is a proposal to build a third game farm in this immediate vicinity that would create a 65-acre enclosure. Cumulatively there would be 975 acres of land within a 2.5 square mile area fenced to exclude wild ungulates. Within these enclosures there could potentially be 480 adult elk plus 10 pronghorn antelope, 10 mule deer, 10 white-tailed deer, 10 bighorn sheep and 10 mountain goats. The combined game farms would result in 530 animals being confined on 975 acres on a year-long basis. In addition, 400 to 450 adult cattle would continue to be wintered within the proposed game farm. This large number of animals, diversity of species (3 cervids, 4 bovids) and dual use of the game farm by cattle and game farm animals increases the probability of a disease problem and the risk that pathogens might leave the game farm areas via surface flow of water. There would also be increased opportunity for wild ungulates to come in contact with domestic big game species because of the considerable length of perimeter fence (approximately 6.5 miles) associated with the combined game farms and the diversity of species held in confinement.

REQUIRED STIPULATIONS AND MITIGATIONS

The following mitigation measure has been included by the game farm applicant as part of the Proposed Action, but is repeated here as a required mitigation because of its importance in reducing potentially significant impacts to below the level of significance:

(1) *Provide escort to anyone entering the game farm enclosure (e.g., gas pipeline personnel) when game farm animals are present.*

The above mitigation is required to mitigate potential risk to wildlife posed by possible escape of game farm elk when persons enter the proposed game farm enclosure. Risk to wildlife from contact between game farm animals and wild game is potentially significant due to the site being located in an area currently utilized by wild game.

(2) *Shooting in the game farm enclosure using high-powered rifles must not occur in the direction of residences or the section of Highway 87 located within a 1-mile radius of the game farm. A guide or representative of the ranch familiar with the terrain must accompany each harvester to be sure shooting does not occur toward the nearby residences or highway.*

This stipulation is imposed to mitigate potentially significant risk to public health and safety due to the proximity of residences and the highway to the game farm site. There cannot be shooting on, from, or across any public road (87-3-101, MCA). The requirement to have a guide with each elk harvester to assure that shooting does not occur in a direction toward the residences and highway would significantly reduce the chances of impacting human health and safety.

RECOMMENDED MITIGATION MEASURES

The following mitigation measures are recommended to address minor impacts identified in the EA that are likely to result from the Proposed Action:

- The moderate to strongly alkaline reaction of the soil should be considered when designing the exterior fence. Uncoated steel posts may corrode with time in these soils.

- Maintain a reasonable stocking rate within the game farm enclosures to minimize changes in soil structure and potential increases in erosion from disturbed ground, and to mitigate potential impacts from runoff and fecal matter.

- Potential water quality impacts could be minimized by disposing dead animals and excess fecal material at a site that is isolated from surface water and groundwater (disposal must meet county regulations for solid waste). Game farm animal gut piles would be disposed of in a gas-fired incinerator.

- Dust management activities include spraying water on unpaved roads during the dry season, vegetating exposed ground where possible, protecting fill piles from wind erosion, and limiting ground disturbance to only the area necessary to complete the job.

- Employ the following best management practices (BMPs) to reduce odor problems if they occur: (1) incorporate waste into soil quickly by plowing or discing; (2) spread waste during cool weather or in the morning during warm, dry weather; and (3) properly dispose of animal carcasses. Carcasses should not be disposed of in or adjacent to water bodies, roads, and ditches.

- For any areas that may have erosion and sedimentation problems, utilize BMPs where surface water could enter gullies draining to Big Sandy Creek. The BMPs may include earth berms, straw bale dikes, vegetative buffer zones, and/or silt fences.

- Monitor the proposed game farm site for invasion of noxious weeds and treat affected areas in a timely manner. Coordinate with the County to develop a weed control plan, if necessary.

- Supplemental feed and minerals should be provided to the elk on a seasonal basis to reduce excessive grazing on preferred pasture plants.

- Store hay, feed, and salt away from exterior fences or enclose in buildings.

- Feed game farm animals at interior portions of the enclosure and not along the perimeter fence.

- Inspect exterior game farm fence on a regular basis and immediately after events likely to damage fence to ensure its integrity with respect to trees, frost-heaving, corrosion, burrowing animals, predators, and other game animals.

- If fence integrity or ingress/egress becomes a problem, adjust the fence as necessary, including: double fencing, electrification, additional post support, replacing damaged posts, or increased fence height.

- During winters of exceptional snow cover, remove snow on either side of the perimeter fence to prevent ingress/egress, or keep game farm animals away from fence areas where significant snow buildup occurs.

- To reduce the concentration of disease pathogens present in feces, at birthing sites, and in the soil to non-virulent levels, impose a 2-week waiting period between removal of game farm animals from a pasture and placement of cattle into a pasture. A similar 2-week waiting period should be imposed between removal of cattle from a pasture and placement of game farm animals into a pasture.

- Risk of disease epidemic or heavy parasite infections among domestic elk can be minimized by maintaining a reasonable domestic elk stocking rate in relation to the enclosure size, periodic removal of manure from concentration areas, and development of a disease immunization and parasite treatment protocol as applicable to domestic elk.

- Mitigate impacts to cultural resources by stopping work in the area of any observed archeological artifact. Report discovery of historical objects to the Montana Historical Society, Historic Preservation Office. If work stoppage in the area containing observed artifacts is not possible, record the location and position of each object, take pictures and preserve the artifact(s).

SUMMARY OF PUBLIC COMMENTS AND FWP RESPONSES

Public comments for the Diamond K Elk Enterprises 2 Game Farm Draft EA were accepted from April 5 through April 26, 1999. FWP received no public comment letters during that time.

CONCLUSION OF THE EA

MEPA and game farm statutes require FWP to conduct an environmental analysis for game farm licensing as described in the Introduction of this Summary. FWP prepares EAs to determine whether a project would have a significant effect on the environment. If FWP determines that a project would have a significant impact that could not be mitigated to less than significant, the FWP would prepare a more detailed EIS before making a decision.

Based on the criteria evaluated in this EA, an EIS is not be required for the Diamond K Elk Enterprises 2 Game Farm. The appropriate level of analysis for the Proposed Action is a mitigated EA because all impacts of the Proposed Action have been accurately identified in the EA, and all identified significant impacts would be mitigated to minor or none.

ANALYSIS OF IMPACT ON PRIVATE PROPERTY

Montana game farm statues (87-4-476, MCA) require that game farm licenses may be denied or issued with stipulations to prevent unacceptable threat of escape of captive game farm animals, and to prevent a significant threat to the safety of the general public and surrounding landowners and by the shooting of game farm animals. MEPA requires FWP to identify and analyze environmental impacts of the Proposed Action and potential mitigation measures. MEPA, as revised by Senate Bill 231 of 1995, also requires agencies to evaluate the impact on private property of regulatory actions, such as denial of a permit or establishment of permit conditions (75-1-201, MCA). The Environmental Quality Council (EQC) has established procedural guidelines to implement these requirements. The analysis provided in the Draft EA was prepared in accordance with implementation guidance issued by the EQC.

In addition, the Private Property Assessment Act (2-10-101, MCA, *et seq.*) requires agencies to determine whether proposed actions by the State of Montana have "taking or damaging implications", such as to constitute a deprivation of private property in violation of the United States or Montana constitutions and, if so, to perform an impact assessment to determine the likelihood that a state or federal court would hold that the action is a taking or damaging, to review alternatives, and to determine the estimated cost of compensation. In accordance with the Act, the attorney general has prepared guidelines, including a checklist, to assist agencies in identifying and evaluating actions with taking or damaging implications.

The Draft EA contains FWP's completed checklist with respect to the required stipulations and mitigations, and has found that the preferred alternative does not have taking or damaging implications and that an impact assessment is not required.

PERSONS RESPONSIBLE FOR PREPARING THE EA

Fish, Wildlife & Parks

Shane Reno, FWP Region 6 Game Warden
2165 Hwy 2 East
Havre, Montana 59501
(406) 265-6177

Al Rosgaard, FWP Region 6 Wildlife Biologist
2165 Hwy 2 East
Havre, Montana 59501
(406) 265-6177

Karen Zackheim, FWP Game Farm Coordinator
Enforcement Division
1420 E. Sixth Avenue
Helena, MT 59620

Maxim Technologies, Inc.

Daphne Digrindakis, Project Manager
Chris Cronin, Environmental Specialist
Doug Rogness, Hydrologist
Mike Cormier, Soil Scientist
Val Jaffe, GIS and Graphics

FaunaWest Wildlife Consultants

Craig Knowles, Wildlife Biologist